

Use this information:

- The 7 T-bar support poles are spaced approximately 40 m apart.
- The giant slalom gate lane is approximately 15 ft wide.
- There are ten ski lanes.
- Each 20-kg bag of salt will cover 400 m² of snow. The entire ski area must be salted twice per day.

$$1 \text{ ft} = 0.3048 \text{ m}$$

$$150 \times 0.3048 = 45.7$$

$$\begin{aligned} A &= l \times w \\ &= 200 \times 45.7 \\ &= 12\,700 \\ &\quad \underline{400} \end{aligned}$$

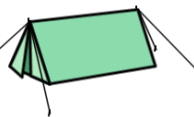
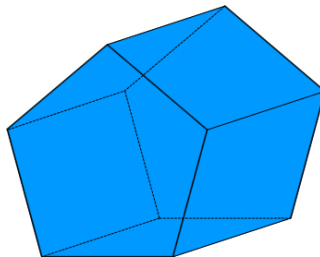
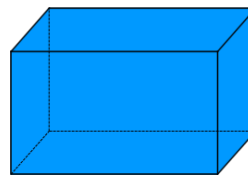
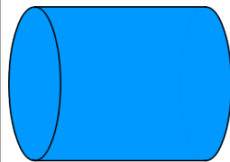
$$= 33 \text{ bags}$$

-twice per day

$$= 66 \text{ bags}$$

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Volume 1.2 p. 18-25



Feb 7-2:31 PM

Volume 1.2 p. 18-25

Volume = Base Area x Height of Object

Example 1 (What Shape?) ^{p 19}

Triangular Prism

Volume = Base Area x Height of Object

$$\text{Volume} = \frac{b \times h}{2} \times H$$

$$V = \frac{2.5 \times 0.45}{2} \times 1.2$$

$$V = 0.5625 \text{ m}^2 \times 1.2 \text{ m}$$

$$= 0.675 \text{ m}^3$$

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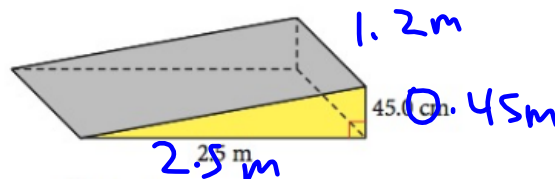
Literacy Connect

The base of a prism refers to one of the two congruent, parallel polygon sides. Depending on the orientation of the prism, the bases can be on the top and bottom, the front and back, or the left and right sides.

Solution

The ramp is in the shape of a triangular-based prism.

Determine the area of the triangular base.



$$A = \frac{1}{2}(b \times h)$$

$$= \frac{1}{2}(2.5 \times 0.45)$$

$$= 0.5625$$

$$45 \text{ cm} = 0.45 \text{ m}$$

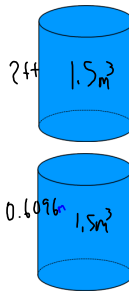
$$\frac{45}{100} = 0.45$$

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Volume = Base Area x Height of Object

Example 2 p 20 Solving for Variables

Example 2 (What Shape?)



$V = A_b \times h$
 $V = \pi r^2 \times h$
 Conversion Factor
 $1.5 = 0.3048 \text{ m}$
 $0.3048 \times 2 = 0.6096 \text{ m}$
 $V = \pi r^2 \times h$
 $1.5 = 3.14 r^2 (0.6096)$
 $1.5 = 1.914 r^2$
 $\frac{1.5}{1.914} = \frac{1.914 r^2}{1.914}$
 $\sqrt{0.78} = \sqrt{r^2}$
 $0.89 = r$

The radius of our pot holder is 0.89 m.

diameter = 1.78 m

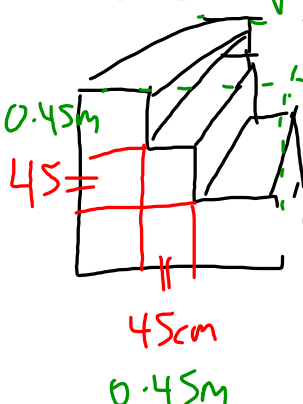
$d = 2r$

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Volume = Base Area x Height of Object

Volume of a Composite Figure

Example 3 p. 21



Option #1
 $V = \left[(0.15 \times 0.15) \times 0.9 \right]$
 Option #2
 $V = (0.45 \times 0.45) \times 0.9$
 Option #1
 Option #2
 $V = 0.1215 \text{ m}^3$ $V = 0.1215 \text{ m}^3$

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Key Concepts

- all measures /units must be common
- $V_{\text{SHAPE}} = A_b \times H_T$

Hmk p. 23-25

q. 1,2,4-8, 9*

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$$\#7 \quad C = 40 \text{ cm} \quad \text{cyl}$$

$$V = 500 \text{ cm}^3$$

$$V = \pi r^2 \times h$$

$$C = \pi d$$

$$40 = 3.14 d$$

$$\frac{40}{3.14} = d$$

$$12.74 = d$$

$$12.74 = d$$

$$\begin{aligned} r &= \frac{d}{2} \\ &= \frac{12.74}{2} \\ &= 6.37 \end{aligned}$$

Feb 8-10:39 AM